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Distress and spousal support in women with breast cancer

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CHAPTER 5 — PARTNER SUPPORT AND DISTRESS IN WOMEN WITH BREAST CANCER: THE ROLE OF PATIENTS' AWARENESS OF SUPPORT AND MASTERY

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ABSTRACT

The aim of the present study was to investigate the association between partners' ways of providing support (both active engagement and protective buffering) and distress in women with breast cancer as a function of patients' sense of mastery, taking into account patients' awareness of the support provided and time. At three months (T1) after diagnosis, women with breast cancer ($n = 82$) and their partners ($n = 82$) were assessed regarding partners' supportive behaviour. Women also indicated their sense of mastery. At both three and nine months (T2) after diagnosis, women reported their level of distress. We found active engagement to be unrelated to distress, for support that was noticed as well as unnoticed by patients, regardless of patients' feelings of mastery and the time frame adopted. In contrast, perceived protective buffering was found to be associated with more distress in the short-term (i.e., cross-sectionally). Moreover, protective buffering that was reported by partners but remained unnoticed by patients was associated with lower levels of distress, but only cross-sectionally for patients who were high in mastery. Over time, protective buffering that remained unnoticed by patients was associated with more distress, regardless of women's sense of mastery.

Keywords: relationship-focused coping, active engagement, protective buffering, invisible support, longitudinal

INTRODUCTION

Social support is a critical component of adaptation when confronted with an ill-

ness such as breast cancer. In the context of intimate relationships, partners are the primary source of support and have been found to play a unique role in the adaptation process of women with breast cancer (Coyne & DeLongis, 1986; Pistrang & Barker, 1995; Helgeson & Cohen, 1996; Hagedoorn, Kuijer, Buunk, Jong, Wobbles, & Sanderman, 2000; Manne, Ostroff, Sherman, Glassman, Ross, Goldstein, & Fox, 2003). Studies have found that patients who perceive their partner as available and who are satisfied with the support received from their partners report less distress, in contrast, patients who feel their partner is unavailable or critical and dismissive are found to report more problems adapting (Blanchard, Albrecht, Ruckdeschel, Grant, & Hemmick, 1995; Weihs, Enright, Howe, & Simmens, 1999; Baider, Ever-Hadani, Goldzweig, Wygoda, & Peretz, 2003; Schroevers, Ranchor, & Sanderman, 2003; Manne, Ostroff, Sherman, Heyman, Ross, & Fox, 2004; Reinhardt, Boerner, & Horowitz, 2006).

In the present study, we focused on supportive behaviour rather than perceived availability. Specifically, we addressed the way in which partners provided emotional or other types of support (Hagedoorn et al., 2000; Kuijer, Ybema, Buunk, Jong, Thijs-Boer, & Sanderman, 2000). For example, dealing with the other person's fears and worries by involving the other in conversations is one way of providing emotional support, while minimizing the fears and worries of the other person is another way. Few studies have investigated the association between different ways of spousal support and distress

in people confronted with cancer, taking into account (1) patients' awareness of the way in which support is provided by partners (Bolger, Zuckerman, & Kessler, 2000), (2) individual difference characteristics of patients (Kobasa & Pucetti, 1983), such as patients' sense of mastery (i.e., perceived control), and (3) the time frame (short-term or long term-effects) adopted (DeLongis & Holtzman, 2005). The current study aims to fill these gaps.

Ways of providing support

According to Coyne et al. (1986; 1991), coping with a chronic illness is a dyadic process in which partners not only have to deal with their own distress (i.e., emotion-focused coping) and with various instrumental tasks (i.e., problem-focused coping), but also with the needs and worries of the other person (i.e., relationship-focused coping). Depending on situational, personal and relational factors, partners may use various positive (e.g., showing empathy and interest) or negative (e.g., withdrawal and dismissal) relationship-focused coping strategies (O'Brien & DeLongis, 1996). In the literature, active engagement and protective buffering are identified as two broad classes of relationship-focused coping strategies (Coyne & DeLongis, 1986) or ways of providing support (Hagedoorn et al., 2000; Kuijer et al., 2000). Active engagement is characterized by involving one's partner in discussions, asking how the patient feels and other problem- and emotion-focused strategies. Although associations were found between active engagement and positive outcomes such as self-efficacy (Coyne & Smith, 1994; Kuijer et al., 2000) and marital satisfaction (Hagedoorn et al., 2000), in contrast to expectations, studies have failed to find an association between active engagement and distress in chronically ill patients (Hagedoorn et al., 2000; Kuijer et al., 2000; De Ridder, Schreurs, & Kuijer, 2005). *Protective buffering* is characterized by dismissing concerns or negative emotions and yielding

to a partner in order to avoid disagreement. The association between protective buffering as perceived by patients and distress has been inconsistent, with some studies finding no link (Suls, Green, Rose, Lounsbury, & Gordon, 1997; Kuijer et al., 2000; Hagedoorn et al., 2000), while others did find a weak negative association between protective buffering and mental health (De Ridder et al., 2005). These null and weak results may indicate that the association between active engagement and protective buffering on the one hand and distress on the other hand are present only under certain conditions.

Patients' awareness of partner support

Bolger, Zuckerman and Kessler (2000) have suggested that recipients' awareness of the support received may impact the effectiveness of support. Specifically, being aware that one receives and needs help may undermine personal resources such as one's self-esteem and may result in more distress, while support that remains unnoticed (i.e., reported by the provider but not perceived by the recipient) will have no costs, only positive outcomes. In two recent studies among students, Bolger and colleagues (2007; Shrout, Herman, & Bolger, 2006) found support for this idea with respect to both practical and emotional support. Hence, we hypothesized that only active engagement reported by partners but not perceived by patients would be associated with less distress, while active engagement perceived by patients would be unrelated or even positively related with distress (Hypothesis 1). Bolger and colleagues (2000) also suggest that protective buffering support may be effective as long as it remains outside patients' awareness. That is, partners may do something patients are unaware of, such as not expressing their own fears and worries, which might have distressed patients if they had been aware of these concerns and had had to deal with them. In accordance, we hypothesized that protective buffering that was reported by partners but not perceived by patients would

be associated with less distress, whereas protective buffering support that was perceived by patients would be associated with more distress (Hypothesis 2).

Mastery

It has been suggested that having a supportive partner may be more important for some people than for other people (e.g., Collins & Feeney, 2000; Penninx, Tilburg, Boeke, Deeg, Kriegsman, & Eijk, 1998). For example, people who feel less control over their environment and expect to be unsuccessful in resolving problems themselves (i.e., low sense of mastery) may rely heavily on their intimates for comfort and safety (Hobfoll & Walfisch, 1984; Hobfoll & Lerman, 1988). In other words, mastery may be another important moderator in the association between different ways of providing support and distress. In statistical terms, this refers to an interaction effect of different ways of providing support by mastery on distress. The possible moderating role of mastery is consistent with an established tradition of research that places broad efficacy expectations (e.g., mastery, fatalism, locus of control, attachment) as central elements that will impact the outcome of social support processes (Kobasa & Pucetti, 1983; Sarason, Sarason, & Pierce, 1988; Goodwin, Allen, Nizharadze, Emelyanova, Dedkova, Saenko, & Bugrova, 2002; Feeney & Collins, 2004).

Mastery is a developmentally-based mental representation about one's ability to control life as it presents itself and to influence events personally, in contrast to feeling fatalistic and helpless (Pearlin & Schooler, 1978; Edwards, 2002). It is possible that the felt inadequacy of people low in mastery makes them more vulnerable to poorer adjustment, especially when support is unhelpful (Hobfoll & Walfisch, 1984), while people who perceive more control over their lives may be more resilient, even when support is unhelpful (Carver, 1998; Kobasa & Pucetti, 1983). In accordance, we hypothesized that active engagement and protective buffering support

as perceived by patients would be associated with more distress, especially in women with a weaker rather than a stronger sense of mastery (Hypothesis 3). Moreover, people low in mastery may not only be hampered more by unhelpful interactions; they may also profit less from supportive interactions as they appraise stressors as more threatening and may be less aided by the same level of support as people high on mastery (Felsten, 1991). In accordance, Goodwin et al. (2002) showed that social support did have a smaller positive impact on mental health in people high in fatalism than in people low in fatalism. Hence, we hypothesized that more active engagement and protective buffering reported by partners but not perceived by patients would be associated with less distress in women with a higher rather than a lower sense of mastery (Hypothesis 4).

Time

Finally, time may explain variation in the effectiveness of support (DeLongis & Holtzman, 2005). Support that seems effective in the short-term may or may not be effective over time, while support that seems ineffective or even deleterious in the short-term may become effective or may no longer be deleterious over time. For example, DeLongis & Holtzman (2005) reported that while empathic responding did not always have an immediate beneficial effect, such behaviours were found to be associated with future favourable outcomes, such as a decrease in marital tension over time. Similarly, the effectiveness of different ways of providing support may vary as a function of time. The only two previous studies (Suls et al., 1997; De Ridder et al., 2005) with a prospective design investigating the outcome of ways of providing support did not find a relationship between perceived active engagement and psychological distress in patients over time. Moreover, only De Ridder et al. (2005) found a weak association between the use of protective buffering strategies by partners as perceived by patients and distress in patients

with asthma and diabetes over time. None of these studies, however, investigated the impact of active engagement and protective buffering that occurs outside patients' awareness or included mastery as a potential moderator. Therefore, in the present study we explored the short- and long-term outcomes of different ways of providing support by testing our hypotheses both cross-sectionally and longitudinally.

METHOD

Procedure and participants

The data for the present study was collected as part of a larger study investigating the influence of intimate relationship dynamics on adaptation to breast cancer in the first year after diagnosis. Participants were recruited from five hospitals in the Netherlands. There were multiple assessments within a twelve month period, including three extensive self-report assessments and briefer telephone assessments every six weeks. Inclusion criteria were: within three months after diagnosis, living with a partner, willingness to participate in the study by women with cancer and their male partners, woman's age between 30 and 75 years, prognosis of at least 15 months survival, no previous cancer history for either the woman or partner, and both fluent in Dutch. In a procedure required by the hospital Medical Ethics Committee, women received a letter from their physician inviting the couple to participate in the study. Women interested were encouraged to enlist their partners and to mail back consent forms. After approximately four weeks, couples who did not return the consent form were contacted by the study team with a reminder.

A total of 284 patient couples received information about the study. In the end, 92 couples (a response rate of 32%) participated in the study. This response rate reflects the burden of the intensive design of the study and, perhaps more importantly, the consent procedure required by the Medical Ethics Committee and the initiative it required from the patients. Nonetheless, this

percentage is comparable to what has been found in some well-resourced studies investigating couples (Manne, Ostroff, Winkel, Fox, Grana, Miller, Ross, & Frazier, 2005; Manne, Ostroff, Norton, Fox, Goldstein, & Grana, 2006). Not surprisingly, the main reason (31%) for not participating was that couples indicated that participation was too great a burden. In addition, 28% of the couples were simply not interested; in 15% of the cases a partner was not willing to participate; 10% indicated that they wanted to close the cancer history; and another 16% of the couples gave other reasons for not participating in the study.

For the present study, we selected those women with breast cancer and their partners who had no missing data on the variables under study at both three (T₁) and nine months (T₂) after diagnosis. A six-month period was considered long enough to detect meaningful changes in distress. This resulted in a group of 82 patients and their partners. T-test revealed no differences in socio-demographics between the participants included and excluded from analyses. The demographics of the women and men included in the present analyses are presented in Table 1.

Measures

The current study applies a longitudinal design in which the predictor variables (i.e., active engagement and protective buffering as perceived by patients and as reported by partners) and the moderator variable (i.e., mastery) were assessed at three months after diagnosis (T₁), and the outcome variable (i.e., distress) was assessed at three (T₁) and nine months after diagnosis (T₂).

Active Engagement and Protective Buffering. Patients were asked to judge to what extent their partners adopted active engagement and protective buffering strategies as ways of providing support. A parallel measure assessed the partners' perception of their own behaviour. These measures were developed by Buunk et al. (1996) and have been used extensively (Hagedoorn

et al., 2000; Kuijer et al., 2000; De Ridder et al., 2005). The active engagement scale consists of five items (e.g., "My partner asks me how I feel"/"I ask my partner how she feels") and eight items measure protective buffering (e.g., "My partner tries to keep his worries about me to himself"/"I try to keep my worries about my wife to myself"). All items were answered on a five-point scale ranging from 'never' (1) to 'very often' (5). Cronbach's alpha for the active engagement scale was .78 and .82 as assessed by patients and partners, respectively. Cronbach's alpha for the protective buffering scale was .61 and .76 as assessed by patients and partners, respectively.

Mastery. Patients general perception of control was measured using the Mastery scale of Pearlin and Schooler (1978). This seven-item self-report questionnaire assesses overall perceived control over one's life and has been used regularly in the context of stress and coping (e.g., Hobfoll, Johnson, Ennis, & Jackson, 2003; Dabbs, Dew, Stilley, Manzetti, Zullo, McCurry, Kormos, & Iacono, 2003; Pudrovskaya, Schieman, Pearlin, & Nguyen, 2005). These studies show that the scale has adequate reliability and validity. Items include "I have little control over the things that happen to me" and "I feel helpless in dealing with the problems of life" that were answered on a five-point scale, ranging from 'totally agree' (1) to 'totally disagree' (5). Cronbach's alpha in the present study was .74.

Distress. Patients completed the Hospital Anxiety and Depression Scale (HADS) (Zigmond & Snaith, 1983; Spinhoven, Ormel, Sloekers, Kempen, Speckens, & Hemert, 1997) in order to assess distress at three (T1) and nine months after diagnosis (T2). The HADS is a fourteen-item self-report scale assessing feelings of anxiety and depressive symptoms on a four-point scale (0 to 3). In the present study the total score was calculated as an indicator of psychological distress. Harter et al. (2006) found in a large sample of medically ill patients, that the

HADS outperformed a widely used screening instrument, the twelve-item General Health Questionnaire (GHQ-12), and that there was no advantage of using the individual depression and anxiety subscale of the HADS, rather a single summary scale. Cronbach's alpha for the total score was .87 at T1 and .92 at T2, further supporting the use of the total scale.

Statistical Analysis

The associations between the main variables and socio-demographics (age, education level, employment status, in treatment yes/no, type of treatment) were explored to see which demographic variables should be included in the model as covariates. To test the hypotheses, multiple hierarchical regression analyses were performed. To test the association between active engagement and protective buffering that occurred outside patients' awareness and distress, patient accounts were entered into the regression first, followed by partner reports (i.e., support reported by partners, controlling for the support perceived by patients). This procedure is in accordance with Bolger et al., (2000) and indicates the support provided by partners but unnoticed by patients. Moreover, in order to investigate the moderating role of mastery, interaction terms were computed as the product of the centered scores (i.e. centered around zero) on the component variables of the interaction term to minimize multicollinearity (Aiken & West, 1991). An additional advantage of this method is that the component variables of the interaction term remain dimensional which limits the loss of power and prevents an overestimation of the results (Coyne & Whiffen, 1995). As a visual aid to determine the direction of the interactions between partner support and mastery, the regression lines for the association between spousal support and distress were drawn at two levels of mastery (mean \pm 1 SD). As suggested by Aiken & West (1991), additional regression analyses were completed to test the significance of the simple slopes.

RESULTS

Preliminary analysis

Independent T-test revealed that for women with breast cancer, being in treatment or having a paid job was not associated with any of the variables under study. Also, analysis of variance showed that type of treatment was not associated with any study variable. We did find that women with a lower level of education reported a lower sense of mastery, $F(2) = 4.82$, $p = .010$, and had partners who reported more protective buffering, $F(2) = 10.23$, $p < .001$. Moreover, women who reported more distress at T2 were younger ($r = -.22$, $p < .05$) and were more likely to have a partner who had a paid job at T1, $t(80) = 2.01$, $p = .048$. Furthermore, older partners ($r = .26$, $p < .05$) and partners with a lower level education, $F(2) = 10.33$, $p < .001$, reported the use of more protective buffering strategies. Since the socio-demographic variables were not simultaneously related with predictor and outcome variables, they could be excluded as covariates from further analysis (Christenfeld, Sloan, Carroll, & Greenland, 2004).

Table 2 shows that patients' perception of active engagement and partners' report of active engagement as well as patients' perception of protective buffering and partners' reports of protective buffering were related ($r = .46$, $p < .001$ and $r = .31$, $p < .001$, respectively). The moderate strength of these associations indicates that patients and partners may disagree about the way support was provided, suggesting that support may have been provided that had not been registered by patients.

The role of active engagement

Regression analyses showed that active engagement that was perceived by patients and active engagement that was reported by partners but remained unnoticed by patients (i.e., partner accounts of active engagement after controlling for patient account) were not associated with distress at T1 ($\Delta R^2 = .03$, $p = .132$; $\Delta R^2 = .04$, $p = .081$, respectively).

Thus, our hypotheses stating that particularly active engagement reported by partners and not perceived by patients would be associated with less distress was not supported (Hypothesis 1).

Furthermore, to test our *third hypothesis*, perceived active engagement, mastery and the interaction between mastery and perceived active engagement were entered subsequently into a hierarchical regression analysis. This revealed that mastery had a main effect on distress ($\beta = -0.26$, $p = .019$) explaining 7% of the variance in distress but no interaction effect ($\Delta R^2 = .03$, $p = .107$). Thus, we found no support for our third hypothesis stating that perceived active engagement would be especially deleterious for women low rather than high on mastery.

Our *fourth hypothesis* states that active engagement that remains unnoticed by patients would be associated with less distress, but especially in women with a higher sense of mastery. To test this hypothesis we entered active engagement as perceived by patients (step 1) followed by active engagement as reported by partners (step 2), mastery (step 3) and the interaction between mastery and partner accounts of active engagement (step 4) into the equation. Results showed no significant interaction effect ($\Delta R^2 = .01$, $p = .358$), indicating that mastery did not moderate the association between active engagement that remained unnoticed and distress (see Table 3).

Thus, our fourth hypothesis regarding active engagement was also not supported.

Also in the longitudinal analysis, we found no significant association between active engagement as perceived by patients and distress at T2 ($\Delta R^2 = .00$, $p = .919$) or between active engagement that remained unnoticed and distress at T2 ($\Delta R^2 = .00$, $p = .507$), after controlling for distress at T1. Nor did we find significant interaction effects of active engagement (as perceived by patients or only reported by partners) by mastery on distress at T2 ($\Delta R^2 = .00$, $p = .481$; $\Delta R^2 = .00$, $p = .694$, respectively),

after controlling for T1 distress. Results did show a positive main effect of T1 distress ($\beta = 0.54, p < .001$) on distress at T2, explaining 29% of the variance. Mastery did also have a main effect on distress at T2 ($\beta = -0.24, p < .016$) after controlling for distress at T1 and active engagement ($\Delta R^2 = .05$), indicating that women high on mastery reported less distress over time.

The role of protective buffering

Next, we investigated the association between protective buffering and distress. Patients' perceived protective buffering did have a positive effect on distress at T1 ($\beta = .28, p = .011$), explaining 8% of the variance in distress, which is in line with our second hypothesis. Next, we investigated whether protective buffering that was reported by partners but remained unnoticed by patients (i.e., partner account of protective buffering controlling patient account) was associated with distress at T1 (i.e., Hypothesis 2). This association was not found to be significant ($\Delta R^2 = .01, p = .401$).

Furthermore, to test our *third hypothesis*, perceived protective buffering, mastery and the interaction between mastery and perceived protective buffering were entered subsequently into a hierarchical regression analysis. This revealed that perceived protective buffering and mastery both had a main effect ($\beta = 0.24, p = .023, \beta = -0.25, p = .017$; respectively), explaining 12% of the variance in distress ($p = .019$) but no interaction effect ($\Delta R^2 = .02, p = .144$). Thus, we found no support for our third hypothesis stating that perceived protective buffering would be especially deleterious for women low on mastery.

Our *fourth hypothesis* states that protective buffering that remains unnoticed by patients would be associated with less distress, but especially in women with a higher sense of mastery. To test this hypothesis, we entered protective buffering as perceived by patients (step 1) followed by protective buffering as reported by partners (step 2),

mastery (step 3) and the interaction between mastery and partner accounts of protective buffering (step 4) into the equation. Results showed a significant interaction effect, indicating that mastery moderated the association between protective buffering support that remained unnoticed (i.e., protective buffering support as reported by partners controlling for protective buffering perceived by patients) and distress (see Table 4).

Figure 1 shows that high levels of protective buffering support reported by partners but not perceived by patients was differently associated with distress depending on patients' sense of mastery. The simple slopes for patients high and low on mastery did not differ significantly from zero ($B = 2.24, p = .102$ and $B = -2.31, p = .141$, respectively). However, the significant interaction effect indicates that, in comparison to women with a weaker sense of mastery, women with a higher sense of mastery reported less distress when partners reported high levels of protective buffering they were unaware of. Specifically, additional tests of differences between the predicted values on distress showed that the value in the low mastery group differed significantly from that in the high mastery group when men indicated to be engaged in much protective buffering ($B = -.72, p = .002$), whereas no significant differences between the two groups was observed in the case of little protective buffering ($B = -.04, p = .835$). These findings are in line with our *fourth hypothesis*.

The results of longitudinal analyses revealed that perceived protective buffering was not associated with more distress at T2 after controlling for distress at T1 ($\Delta R^2 = .01, p = .360$), regardless of women's sense of mastery ($\Delta R^2 = .01, p = .400$). Protective buffering reported by partners, after controlling for protective buffering perceived by patients, was associated with more distress over time ($\Delta R^2 = .04, p = .044$). This indicates that women with breast cancer who received more protective buffering they were unaware of showed more distress over time. Mastery

did not moderate this association but did have a negative effect on distress at T2 after controlling for distress at T1 and protective buffering support ($\Delta R^2 = .04$, $p = .043$).

DISCUSSION

The main finding of the present study indicate that active engagement was not related with distress, whereas the association between protective buffering and distress was found to be influenced by patients' awareness, their sense of mastery and by the time frame adopted. Women who perceived their partner as engaging relatively often in protective buffering strategies were more distressed in the short-term. Furthermore, women with a higher sense of mastery reported less distress in the short-term than women with a lower sense of mastery if their partner engaged relatively often in protective buffering that remained unnoticed by these women. In the long-term, however, protective buffering that was reported by partners but unnoticed by patients was associated with more distress, regardless of patients' sense of mastery.

The finding that perceived protective buffering was associated with more distress in the short-term (i.e., cross-sectional) is in accordance with our second hypothesis and in line with previous studies showing that unhelpful support behavior such as minimizing or avoiding fears and worries is associated with more distress (Manne, Taylor, & Dougherty, 1997; Kuijer et al., 2000). An alternative explanation for the association between patients' perception of protective buffering and distress might be that more distressed patients elicit more protective buffering strategies from their partner. Although Suls et al. (1997) found some sup-

port for this reasoning, the present results do not seem to support this possibility as one would also expect distress in patients and protective buffering reported by partners to be related. In the present study we found no such association¹. Over time, protective buffering perceived by women with breast cancer was not associated with more distress, which is in contrast with some findings (Manne, Ostroff, Winkel, & Grana, 2005; De Ridder et al., 2005) but not others (Suls et al., 1997).

In the present study, we found that in the short-term (i.e., cross-sectionally), high levels of protective buffering support reported by partners but which remained outside patients awareness were differently associated with distress depending on the women's sense of mastery. Women high on mastery seem, at least temporarily, able to profit from partners who use more protective buffering strategies they are unaware of, while this type of support seems relatively deleterious for women low on mastery. Thus, the notion by Bolger et al. (2000) that protective buffering may be beneficial to the recipient as long as it occurs outside awareness was only found to be true for women high on mastery and only in the short-term.

The interaction effect of protective buffering that remained unnoticed by mastery on distress may be explained by arguing that protective buffering strategies, even when the actual support behaviours remain unnoticed, can give patients the feeling that a partner is oblivious to the suffering imposed by the illness as he does not express his own concerns and tries to act as if everything is ok. This may be more distressing for women low on mastery than for women high on mastery, as it is in contrast with their own appraisal of the situation and distress levels.

1. It can also be argued that patient distress may not have an immediate impact on partner support but may erode partner support over time, which in turn may contribute to more distress (Bolger, Foster, Vinokur, & Ng, 1996). Therefore, we investigated whether patient distress (T1) was associated with changes in partner reported protective buffering and active engagement over time. Regression analysis showed that patient distress at T1 did not explain partner reported support (either active engagement or protective buffering) at T2 when partner reported distress at T1 was controlled for. Thus, this alternative explanation was not supported.

An alternative explanation for the interaction effect might be that especially women low on mastery may get contaminated by the distress of their partner that may underlie the use of more protective buffering strategies. While partners may use protective buffering strategies to deal with and mask their own strong emotions (Coyne & Smith, 1991; Suls et al., 1997; Hinnen, Hagedoorn, Sanderman, & Ranchor, 2007), they may not be able to do so completely. That is, there may be some leakage of emotions (Ekman & Friesen, 1969). The suggestion that especially people low on mastery may be susceptible to the stress of their intimates (Hobfoll & Lerman, 1988) could explain why more partner reported protective buffering that remained unnoticed was associated with more distress in women low on mastery in comparison to women high on mastery.

Over time (i.e., longitudinally), protective buffering support that was reported by partners but remained unnoticed by patients was associated with more distress in all women, regardless of their sense of mastery. Why would protective buffering behaviour that remains unnoticed be deleterious over time? Protective buffering support that occurs outside awareness may wear down patients' personal resources. While unhelpful interactions that are recognized may be modified or buffered by other coping resources (Manne et al., 2003), those that remain outside awareness may not be challenged. Instead, they may continue to impact coping efficacy and situational control (Manne & Glassman, 2000) which may generalize to a weaker sense of self-esteem and, in turn, to more distress over time (Aldwin, Sutton, & Lachman, 1996; Carver, 1998).

The finding that protective buffering did explain distress better than active engagement is in accordance with most studies (Kuijer et al., 2000; De Ridder et al., 2005) and supports the idea that unsupportive interactions impact patients' well-being more than supportive interactions (Schroivers et al., 2003; Pistrang & Barker, 1995;

Manne et al., 1997). These findings are also in accordance with the more general notion that negative events seem to have a stronger impact on people's well being than positive events (Taylor, 1991). Possibly, evolutionary processes may have predisposed human beings to be more vigilant regarding negative experiences because they represent potential threats to survival and security.

Moreover, the explanation offered by Bolger and colleagues (2000) that supportive interactions, such as active engagement, are most effective when they are not perceived by recipients but only reported by providers was not supported in the present study. An explanation for this may be that Bolger et al. (2000; 2006; 2007) focused on acute stressors (i.e., bar examination, speech task) that allows people to exert a high degree of control, whereas in the present study we focused on a chronic, less controllable stressor. It can be argued that, especially in the former situation knowing that one needs help is deleterious, while in the latter situation needing and receiving support may be much more accepted and appreciated. It remains unclear why we and others did not find an association between active engagement and distress and future studies may investigate other moderators.

We found that the moderating role of mastery in the association between ways of providing support and distress was limited. Possibly, mastery may impact on other aspects of the support process, such as the tendency to seek support or embrace the support received (Felsten & Wilcox, 1992), more than the effectiveness of different ways of providing support. We did find mastery to have a main effect on distress, both cross-sectionally and over time. This is in accordance with other studies showing that people high on mastery typically experience less distress when confronted with a physical or psychological threat (Stiegelis, Hagedoorn, Sanderman, Zee, Buunk, & Bergh, 2003; Aldwin et al., 1996; Bovier, Chamot, & Perneger, 2004). Although one can argue

that there might be some overlap in the items measuring mastery and distress, the two constructs appear to be distinct as was shown by Dalgard et al. (2007). This is also supported by the finding in the present study that mastery and distress were only moderately correlated and that mastery did explain some of the variance in distress at T2, after controlling for distress at T1. Furthermore, it should be noted that distress was found to be strongly correlated over time, leaving relatively little variation in distress to be explained by spousal support.

The present study has some distinct strength, such as a longitudinal design and the availability of partner reports of the support provided as well as patient reports of the support received, but had some limitations as well. In the present study, we focused on women with cancer and male partners. This may have had an effect on the results. Male partners of women confronted with cancer have been found to report less distress than female partners (Hagedoorn, Buunk, Kuijer, Wobbles, & Sanderman, 2000; Hagedoorn, Sanderman, Ranchor, Brilman, Kempen, & Ormel, 2001; Tuinstra, Hagedoorn, Sonderen, Ranchor, Bos, Nijboer, Sanderman, & ' , 2004) and men have been found to be more reluctant to acknowledge threatening experiences and respond to distress with more repressive and distancing strategies (Kring & Gordon, 1998; Lutzky &

Knight, 1994). Therefore, we should be careful to generalize the present findings to men with cancer and their female partners (Hagedoorn, Sanderman, Bolks, Tuinstra, & Coyne, in press). Moreover, in the present study, the response rate was relatively low, potentially biasing our sample. Findings should therefore be replicated in future studies. Moreover, the reliability coefficient of protective buffering reported by patients was rather low (.61), which might have impacted the results. Similar reliability coefficients have been found in other studies (Hagedoorn et al., 2000; De Ridder et al., 2005) and this scale may have to be developed further, as was suggested by De Ridder et al. (2005).

This first study investigating partner support that occurs outside the awareness of women with breast cancer found little empirical evidence for a beneficial effect of such partner support. Active engagement by the partner, whether it was perceived by patients or not, was not associated with less distress. Protective buffering that remained unnoticed by the patient was associated with lower levels of distress, but only cross-sectionally for patients who were high in mastery. Surprisingly, over time only protective buffering that patients were unaware of appeared to be deleterious.

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Table 1.

Descriptive characteristics at T1		
	Women with Cancer	Partners
Age	52.2 (SD =9.0)	54.0 (SD = 9.0)
Education level		
Lower level	24 (29%)	24 (29%)
Secondary level	37 (45%)	32 (39%)
Higher level	21 (26%)	26 (32%)
Employment status, yes	38 (46%)	55 (67%)
Surgery	82 (100%)	
Adjuvant treatment	73 (90%)	
In treatment	52 (63%)	
Chemotherapy	24 (29%)	
Radiotherapy	18 (22%)	
Hormonal therapy	12 (15%)	
Alternative therapy	3 (4%)	

Table 4.

Distress at T1 explained by protective buffering and mastery				
Distress at T1				
	ΔR^2	ΔF (p value)	B^a (p value)	
Step 1	.08	6.70 (p < .011)		
Patient perceived Protective Buffering				3.02 (p = .016)
Step 2	.01	0.71 (p = .401)		
Partner reported Protective Buffering				-0.04 (p = .974)
Step 3	.06	5.04 (p = .028)		
Mastery				-0.38 (p = .015)
Step 4	.06	5.49 (p = .022)		
Mastery X Partner reported Protective Buffering				-0.51 (p = .022)

^a Unstandardized regression coefficients of the final model are presented

Figure 1. Distress at T1 explained by protective buffering support reported by partners and not perceived by patients and mastery



